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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/655,944

09/04/2003

Tong Xie

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EXAMINER

ALSOMIRI, ISAM A

ART UNIT

PAPER NUMBER

3662

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/25/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/655,944

Applicant(s)

XIE ET AL.

Examiner

Isam Alsomiri

Art Unit

3662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-8, 10-18 and 20-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-8, 10-18 and 20-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 2-8, 10-18, and 20-25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Regarding claims 5-6, 15-16, and 22-23, the disclosure does not describe or explain the newly amended limitations "Whereupon said first limited angular range has been swept through and said first light beam steering device stops sweeping said first light beam".

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. **Claims 2-8, 10-18, and 20-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Murakami et al US005148016A.**

2. Referring to claims 5, 15, and 22, Murakami discloses in figure 1b an optical position-tracking system comprising; a first light beam steering device (131,125) for sweeping a first light beam through a first angular range  $\phi_1$  to cause a reflection of a first light beam by a target back to the first light beam steering device to be directed towards a direction facilitating determination of a position of said target (112), wherein the first direction is substantially parallel to a first light direction from which the first light beam is received at the first light beam steering device (see direction from 123 to 125 in figure 1b); and a second light beam steering device (132,126) for sweeping a second light beam through a second angular range  $\phi_2$  to cause a reflection of said second light beam by said target back to said second light beam steering device to be directed towards a direction facilitating determination of said position of said target, wherein the second direction (from 126 to 124) is substantially parallel to a second light direction (124 to 126) from which the second light beam is received at the second light beam steering device; wherein said position of said target is determined using a triangulation technique (see col. 2 lines 25-28) utilizing a first angular value of said first light beam and a second angular value of said second light beam (col. 2 lines 46-49), and wherein said first angular value and said second angular value depend on the existence of said respective reflection (see col. 2 lines 40-46). Further, Murakami teaches the first mirror drive 131 rotates mirror 125 at a predetermined angular velocity and range to look for the target in screen 104 (see figure 1b, col. 3 lines 16-19, col. 9 lines 16-28), which reads on the broad claim language "if said target reflects said first light beam when said first light beam is at a particular angular value, said first light beam steering device

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sweeps said first light beam through a limited angular range that includes said particular angular value until said target fails to reflect said first light beam” since the angular range covers the whole screen, and the claim language does not call for a change in the angular range.

3. Referring to claims 2, 10, Murakami teaches a processing unit for determining said position of said target (see col. 23 lines 56-59).
4. Referring to claims 3, 11, 20, Murakami teaches the position of said target is an absolute position (see Abstract).
5. Referring to claims 4, 14, 21, Murakami teaches the target includes a retro-reflecting surface (see Abstract).
6. Referring to claims 6, 16, 23, Murakami teaches the second mirror drive 132 rotates mirror 126 at a predetermined angular velocity and range to look for the target in screen 104 (see figure 1b, col. 3 lines 16-19, col. 9 lines 28-37), which reads on the broad claim language “if said target reflects said second light beam when said second light beam is at a particular angular value, said second light beam steering device sweeps said second light beam through a limited angular range that includes said particular angular value until said target fails to reflect said second light beam” since the angular range covers the whole screen, and the claim language does not call for a change in the angular range.
7. Referring to claims 7, 17, 24, Murakami teaches the first light beam steering device and said second light beam steering device are scanning mirror beam steering devices (col. 5 line 65 – col. 6 line 1).

8. Referring to claims 8, 18, 25, Murakami teaches the first light beam and said second light beam are each generated by semiconductor lasers (122 and 121, see col. 6 lines 15-16).
9. Referring to claims 12, Murakami teaches the position enables controlling a cursor in said computer system (see col. 8 lines 49-50).
10. Referring to claim 13, Murakami teaches the position enables inputting data into said computer system (see col. 1 lines 13-22).

### ***Response to Arguments***

11. Applicant's arguments with respect to claims 2-8, 10-18, and 20-25 have been considered but are moot in view of the new ground(s) of rejection.
12. Applicant's arguments filed 10/31/2006 have been fully considered but they are not persuasive. Regarding claims 2-8, 10-18, and 20-25, the newly added limitations "Whereupon said first limited angular range has been swept through and said first light beam steering device stops sweeping said first light beam" when considered broadly does not limit the scope of the claim because stopping the entire system when no reflections is detected is inherent by turning off the system. Therefore, the rejections are maintained.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isam Alsomiri whose telephone number is 571-272-6970. The examiner can normally be reached on Monday-Friday 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on 571-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Isam Alsomiri



January 19, 2007



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